

ing appointments, as if it were a civic duty. In leaflets, women get simple messages—that cancer detected early can be cured, and early cancers can often be treated with breast conserving surgery. The data tell another story: no reliable evidence shows that breast screening saves lives; breast screening leads to more surgery, including more mastectomies; and estimates show that more than a tenth of healthy women who attend a breast screening programme experience considerable psychological distress for many months.^{3 4}

Senior scientists argue that this debate should not be taking place in public.⁵ This misguided paternalism makes us wonder why health professionals are so eager to intervene in healthy people's lives and about those people's own perspectives on risks. In Denmark, the most common cause of death from cancer among women is no longer breast cancer but is now lung cancer, which is mainly self inflicted.

It seems that every person aims to balance the rewards of taking risks against perceived hazards.⁶ This can probably explain why laws on wearing safety belts have not reduced deaths from road crashes. Such deaths now happen to those outside rather than inside the vehicle—probably because drivers who wear safety belts feel safer and drive faster or more carelessly than those who do not.⁶

Another important consideration is the reliability of studies of risk. Increased risks are often reported in case-control studies, which do not reliably identify moderate increases in risk. A much quoted and carefully done meta-analysis of case-control studies claimed to show a 30% increase in the risk of breast cancer after induced abortion,⁷ but this was later refuted by a large cohort study.⁸ Most epidemiologists interviewed by *Science* said they would not take seriously a single study reporting a new potential cause of cancer unless it increased the risk by at least a factor of three; some even noted that the lower limit of the confidence interval should exceed 3.⁹ Nevertheless, lay people are influenced by increases in risk of 50-100%, and this leads to much public anxiety and many negative changes in lifestyle. Some people, for example, will follow unappealing diets or quit sports when told that their bone mineral density is low, even though these diets may not affect bone mineral density and inactivity increases the risk of fractures.

Mass intervention on a fragile basis may lead to mass harm. The main outcome of cancer screening trials—disease specific mortality—is unreliable and biased in favour of screening.^{3 4 10} It therefore seems prudent to show an effect of a screening programme on total mortality in good randomised trials and to inform the public fully about the adverse effects before the programme is implemented. The biggest risk for the population right now may be the uncritical adoption of screening tests for cancer—for example, for cervical, breast, prostate, colon, and lung cancer,^{1 3 10 11} despite lack of evidence of an effect on total mortality. Precursors to cancer can be seen in most healthy people above middle age, and the potential for screening to cause harm and lead to a diagnosis of “pseudo-disease” is frightening. Whether risk factors should be turned into diseases also needs careful reflection for other screening tests—for example, detection of mild hypertension or mild hypercholesterolaemia.

Perhaps it is time to rethink what life is all about and remind ourselves that most people are willing to run substantial risks in their ordinary life to preserve their joy and autonomy. In *Out of Africa*, Karen Blixen wrote that the European wants to get insured against fate, whereas the African takes it as it comes. She also wrote: “Frei lebt wer sterben kann” [Those who can die live freely].

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- 1 Stanford JL, Feng Z, Hamilton AS, Gilliland FD, Stephenson RA, Eley JW, et al. Urinary and sexual function after radical prostatectomy for clinically localized prostate cancer: the Prostate Cancer Outcomes Study. *JAMA* 2000;283:354-60.
- 2 Wolf AM, Nasser JF, Wolf AM, Schorling JB. The impact of informed consent on patient interest in prostate-specific antigen screening. *Arch Intern Med* 1996;156:1333-6.
- 3 Olsen O, Gøtzsche PC. Systematic review of screening for breast cancer with mammography (<http://image.thelancet.com/lancet/extra/fullreport.pdf>).
- 4 Gøtzsche PC. Screening for breast cancer with mammography. *Lancet* 2001;358:2167-8.
- 5 Horton R. Screening mammography—setting the record straight. *Lancet* 2002;359:441-2.
- 6 Richens J, Imrie J, Copas A. Condoms and seat belts: the parallels and the lessons. *Lancet* 2000;355:400-3.
- 7 Brind J, Chinchilli VM, Severs WB, Summy Long J. Induced abortion as an independent risk factor for breast cancer: a comprehensive review and meta-analysis. *J Epidemiol Community Health* 1996;50:481-96.
- 8 Melbye M, Wohlfahrt J, Olsen JH, Frisch M, Westergaard T, Helweg Larsen K, et al. Induced abortion and the risk of breast cancer. *N Engl J Med* 1997;336:81-5.
- 9 Taubes G. Epidemiology faces its limits. *Science* 1995;269:164-9.
- 10 Black WC, Haggstrom DA, Welch HG. All-cause mortality in randomized trials of cancer screening. *J Natl Cancer Inst* 2002;94:167-73.
- 11 Raffle AE, Alden B, Mackenzie EF. Detection rates for abnormal cervical smears: what are we screening for? *Lancet* 1995;345:1469-73.

Endpiece On music

Music authorises, invites the conclusion that the theoretical and practical sciences, that rational investigation will never map experience exhaustively. That there are phenomena “at the centre”... which will endure, boundlessly alive and indispensable, but “outside.” This is, quite straightforwardly, the proof of the meta-physical. Music is significant to the utmost degree; it is also, strictly considered, meaningless. There abides its “transgression” beyond intellect.

George Steiner. *Errata: an examined life*.
London: Phoenix, 1998:75-6

The dangers of our times

Both cancer and heart disease intensify our awareness of the dangers of our times and of the man-made sources of much misery. But the governmental response is meant to obfuscate this vision of sickness as meaning something is wrong with the social order and to replace (medicalize) it with narrowly technical questions. Is there a better mirror of what we are about?

Arthur Kleinmann. *The illness narratives. Suffering, healing, and the human condition*.
New York: Basic Books, 1988

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